

12. DETAILED ANALYSIS OF ALTERNATIVES

This section documents the detailed analysis of alternatives retained in the initial screening presented in Section 11. The detailed analysis provides the basis for identifying a preferred alternative for each site, and for preparing the proposed plan. After review of and comment on the RI/FS and the proposed plan, the detailed analysis will support the final selection of remedial actions for the OU 4-13 sites and preparation of the ROD.

12.1 Introduction

The FS detailed analysis assesses remedial action alternatives with respect to seven of the nine CERCLA evaluation criteria that can be addressed prior to public and agency comment. This analysis is more thorough and extensive than the initial screening presented in Section 11. The seven evaluation criteria form the basis for conducting the detailed analysis, which influence selection of an appropriate remedial action. The intent of this analysis is to present sufficient relevant information to allow decision-makers (i.e., DOE-ID, EPA, and IDHW) to select an appropriate remedy. Evaluation against all nine criteria, including public and state acceptance, is the basis for determining the ability of a remedial action alternative to satisfy CERCLA remedy selection requirements.

The detailed analysis is conducted in two distinct phases. Initially, alternatives are assessed individually against the evaluation criteria. Results of the individual analysis are then used in a relative or comparative analysis (second phase). This second analysis identifies advantages and disadvantages of the alternatives relative to one another, so that the key tradeoffs that decision-makers must balance can be identified.

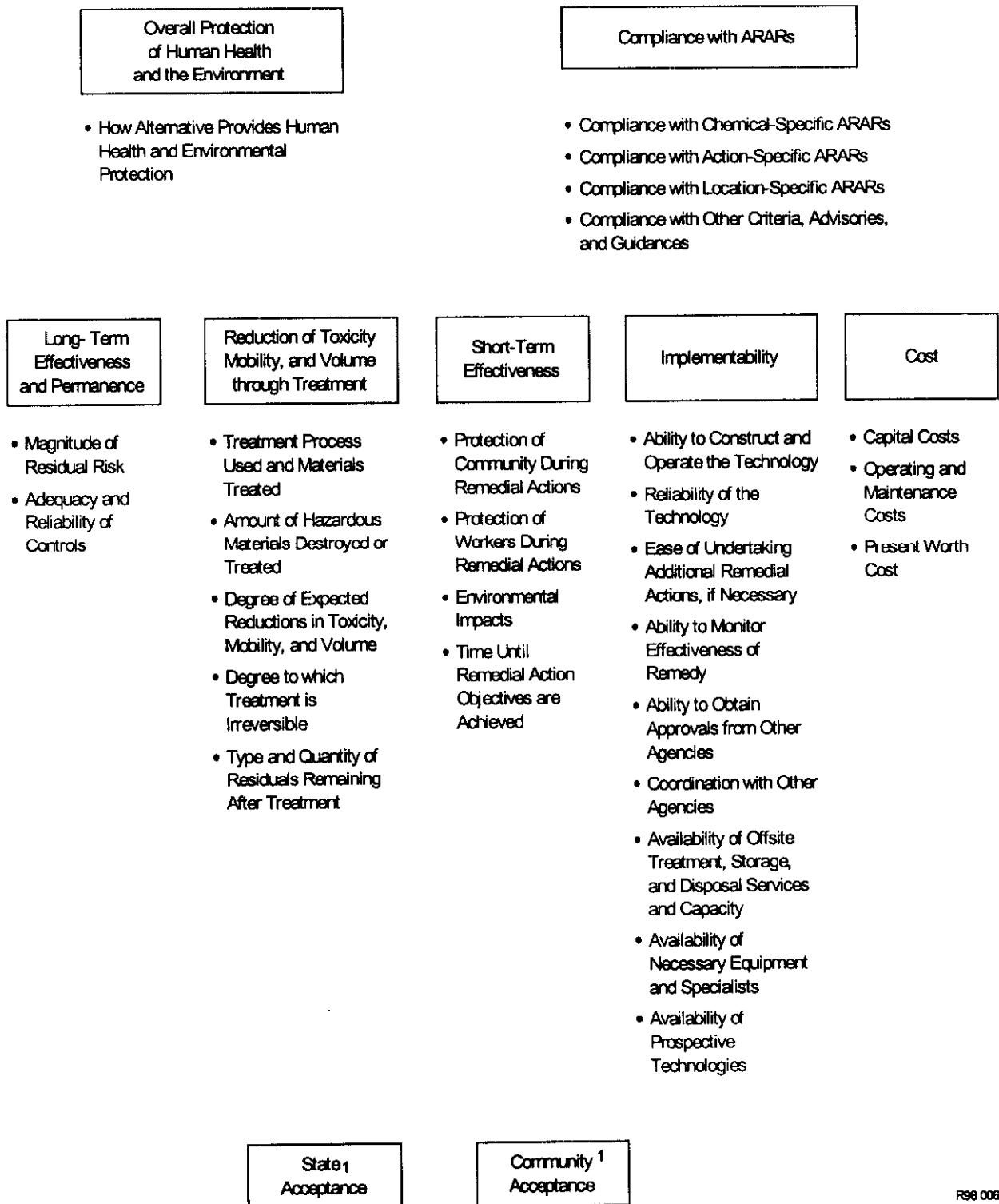
The process is depicted graphically in Figure 12-1. A description of each evaluation criterion outlined in 40 CFR 300.430(e)(9)(iii) is presented below.

12.1.1 Overall Protection of Human Health and the Environment

Alternatives shall be assessed to determine whether they can adequately protect human health and the environment, in both the short and long term, from unacceptable risks posed by hazardous substances, pollutants, or contaminants present at the site by eliminating, reducing, or controlling exposures to levels established during the development of remediation goals consistent with 40 CFR 300.430(e)(2)(i). Overall protection of human health and the environment draws on the assessments of other evaluation criteria, especially long-term effectiveness and permanence, short-term effectiveness, and compliance with ARARs.

12.1.2 Compliance with ARARs

The alternatives shall be assessed to determine whether they meet ARARs under federal environmental laws and state environmental or facility siting laws or provide grounds for invoking one of the waivers in 40 CFR 300.430(f)(1)(ii)(C).



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¹These criteria are assessed following comment on the RI/FS report and the proposed plan.

Figure 12-1. Criteria for detailed analysis of alternatives.

12.1.3 Long-term Effectiveness and Permanence

Alternatives shall be assessed for the long-term effectiveness and permanence they afford, along with the degree of certainty that the alternative would prove successful. Factors that shall be considered, as appropriate, include:

- Magnitude of residual risk remaining from untreated waste or treatment residuals remaining at the conclusion of the remedial activities. The characteristics of residuals should be considered to the extent they remain hazardous, taking into account their volume, toxicity, mobility, and propensity to bioaccumulate.
- Adequacy and reliability of controls such as containment system and institutional controls that are necessary to manage treatment of residuals and untreated waste. This factor addresses, in particular, the uncertainties associated with land disposal for providing long-term protection from residuals; the assessment of the potential need to replace technical components of the alternative, such as a cap or treatment system; and the potential exposure pathways and risks posed should the remedial action need replacement.

12.1.4 Reduction of Toxicity, Mobility, or Volume through Treatment

The degree to which the alternatives employ recycling or treatment that reduces toxicity, mobility, or volume shall be assessed, including how the treatment is used to address the principal threats posed by the site. Factors that shall be considered, as appropriate, include: (a) the treatment or recycling processes that the alternatives employ and the materials they will treat; (b) amount of hazardous substances, pollutants, or contaminants that will be destroyed or recycled; (c) degree of expected reduction in toxicity, mobility, or volume of the waste because of the treatment or recycling and the specification of which reductions are occurring; (d) degree to which the treatment is irreversible; (e) type and quantity of residuals that will remain following treatment, taking into consideration the persistence, toxicity, mobility, and propensity to bioaccumulate of such hazardous substances and their constituents; and (f) degree to which treatment reduces the inherent hazards posed by the principal threats at the site.

12.1.5 Short-term Effectiveness

The short-term impacts of the implementation period for each of the alternatives shall be assessed considering: (a) the short-term risks that might be posed to the community during implementation of an alternative, (b) potential impacts on workers during remedial action and the effectiveness and reliability of protective measures, (c) potential environmental impacts of the remedial action and the effectiveness and reliability of mitigative measures during implementation, and (d) time until protection is achieved.

12.1.6 Implementability

The ease or difficulty of implementing the alternatives shall be assessed by considering the following types of factors, as appropriate: (a) technical feasibility, including the technical difficulties and unknowns associated with the construction and operation of the technology, reliability of the technology, ease of undertaking additional remedial actions, and ability to monitor the effectiveness of the remedy; (b) administrative feasibility, including activities required to coordinate with other offices and agencies and the ability and time needed to obtain any necessary approvals and permits from other agencies (for offsite actions); and (c) availability of services and materials, including the availability of adequate offsite treatment, storage capacity, and disposal capacity and services; availability of necessary equipment and

specialists, and provision to ensure any necessary additional resources; availability of services and materials; and (d) availability of prospective technologies.

12.1.7 Cost

The types of costs assessed include (a) FFA/CO management and oversight costs, which would be incurred primarily by the INEEL ER program; (b) cleanup costs, including construction management and oversight, RD/RA document preparation, and reporting costs; (c) remedial design costs; (d) construction costs, including General and Administrative (G&A) and construction subcontract fees; (e) operations costs; and (f) surveillance and monitoring costs. All initial and future life-cycle costs are normalized to present worth. Present worth is the cumulative worth of all costs, as of the beginning of the first year of activities, accounting for inflation of future costs. Present worth costs were estimated assuming variable annual inflation factors for the first 10 years, in accordance with LMITCO cost estimating procedures, and a constant 5% annual inflation rate after that. A constant 5% discount rate is assumed. Note that "present worth" is referred to as "net present value" in the Summary Cost Estimate Sheets provided in Appendix M, in accordance with LMITCO cost estimating procedures.

Total project cost in FY-98 dollars, and costs in escalated dollars are also presented. Total project cost in FY-98 dollars is the cost of performing all of the work today, without any inflation of costs for future work, while escalated dollars is the cost of performing all of the work accounting for inflation, but not discounted to present worth.

Note that in all cases the "Construction Subcontract" costs (i.e., the actual costs of construction) are much less than the present worth. Management and oversight, both by LMITCO and the construction contractor, account for a significant fraction of the total present worth in some cases. One hundred years of maintenance, surveillance, and monitoring also become a significant part of the present worth for those alternatives incorporating long-term maintenance and monitoring.

The alternative cost estimates are for comparison purposes only and are not intended for budgetary, planning, or funding purposes. Estimates have an estimated range of accuracy of +50 to -30%, in accordance with CERCLA (EPA 1988) guidance. The general methodology, assumptions, and derivations of alternative cost estimates are provided in Appendix M.

12.1.8 State Acceptance

State concerns regarding the RI/FS will be resolved before the proposed plan is issued for public comment.

The comment resolution report for the draft RI/FS report will be included with the final RI/FS report as an appendix.

12.1.9 Community Acceptance

This assessment includes determining which components of the alternatives interested persons in the community support, have reservations about, or oppose. The assessment of community acceptance will be completed through comments on the proposed plan.

Alternatives are not evaluated according to state and community acceptance during the detailed analysis. In accordance with CERCLA guidance, these final two criteria will be evaluated following comment on the RI/FS report and the proposed plan (EPA 1988). The two criteria will be addressed

during selection of a remedy and while the ROD is being prepared (EPA 1988). Responses to public comments will be included in the ROD Responsiveness Summary.

12.2 Individual Analysis of Alternatives

In accordance with CERCLA RI/FS guidance, remedial action alternatives retained for detailed analyses are individually assessed against the evaluation criteria listed above, not including state and community acceptance. The individual analysis of each alternative, from the perspective of WAG 4, is presented in the following subsections.

12.2.1 Alternative 1: No Action With Monitoring

The No Action with Monitoring alternative provides a baseline with which other alternatives can be compared, and could be applied to any OU 4-13 site. This alternative consists only of soil monitoring to assess conditions at OU 4-13 sites.

12.2.1.1 Overall Protection of Human Health and the Environment. Under the No Action with Monitoring alternative, human health and ecological risks at OU 4-13 sites would be the same as those identified in the BRA. The absence of controls for contaminated soils results in no reduction in long-term risks other than by natural radioactive decay. For purposes of this FS and in order to meet the intent of the NCP, it is assumed that under the No Action with Monitoring alternative, the sites could become immediately accessible to the general public. Human health and ecological RAOs would not be met at any of the sites of concern.

12.2.1.2 Compliance with ARARs and TBCs. Table 12-1 presents the evaluation of the No Action with Monitoring alternative for compliance with ARARs and to-be-considered (TBCs). While the No Action with Monitoring alternative does not involve any construction or operational activities that would result in disturbances to the surfaces of the OU 4-13 sites, IDAPA 16.01.01650 could nonetheless apply to any sites that were a source of fugitive dust and is therefore considered an ARAR that would not be met.

The DOE Order 5400.5 would not be met at CFA-08, because predicted health risks to current workers and potential future residents due to radionuclide exposures exceed allowable ranges. The 400 mg/kg soil lead cleanup level TBC would not be met at CFA-10, since lead would remain at concentrations above this level, with no administrative or engineering controls to prevent exposure.

12.2.1.3 Reduction of Toxicity, Mobility, or Volume through Treatment. No treatment is associated with this alternative.

12.2.1.4 Short-term Effectiveness. This alternative can be implemented immediately without additional risks to the community, workers, or the environment. No specialized equipment, personnel, or services are required to implement the No Action with Monitoring alternative.

12.2.1.5 Implementability. No implementation concerns are involved with the No Action with Monitoring alternative.

12.2.1.6 Costs. Estimated present worth costs for the No Action with Monitoring alternative for all sites are shown in Table 12-1. Postclosure costs were estimated for the full duration of the 100-year period of monitoring. The alternative cost estimates are for comparison purposes only and not intended for budgetary, planning, or funding.

Table 12-1. Evaluation of compliance with ARARs for the No Action with Monitoring alternative.

Statute	Citation	Evaluation		
		CFA-04	CFA-08	CFA-10
Action-specific				
Idaho Fugitive Dust Emissions	IDAPA 16.01.01.650	ARAR/No	ARAR/No	ARAR/No
NESHAPs for radionuclides from DOE facilities, emission monitoring, and emission compliance	40 CFR 61.92	ARAR/Yes	ARAR/Yes	Not ARAR
	40 CFR 61.93	ARAR/Yes	ARAR/Yes	Not ARAR
TBCs				
Limit of 100 mrem/yr EDE to public from exposures to external and internal radiation sources	DOE 5400.5	TBC/No	TBC/No	Not TBC
Limit of 10 mrem/yr EDE to the public from airborne doses	DOE 5400.5	TBC/No	TBC/No	Not TBC
400 mg/kg soil lead residential cleanup level	OSWER Directive 9355.4-12	Not TBC	Not TBC	TBC/No

12.2.2 Alternative 2: Institutional Control

This alternative would only meet RAOs for CFA-08, and is discussed only for that site.

12.2.2.1 Overall Protection of Human Health and the Environment. Under the Institutional Control alternative, human health risks at CFA-08 would be administratively controlled for the duration of risk. Long-term risks would be controlled by deed restrictions, and reduced to allowable levels by natural radioactive decay within 189 years.

Short-term protection of human health is high because no remedial actions would be implemented that could result in worker exposures. No ecological risks were identified at CFA-08.

12.2.2.2 Compliance with ARARs and TBCs. Table 12-2 presents the evaluation of the Institutional Control alternative for compliance with ARARs and TBCs. While the Institutional Control alternative does not involve any construction or operational activities that would result in disturbances to the surfaces of CFA-08, IDAPA 16.01.01650 could nonetheless apply to any sites that were a source of fugitive dust and is therefore considered an ARAR that would not be met. DOE Order 5400.5 would be met at CFA-08 by restricting public access.

12.2.2.3 Reduction of Toxicity, Mobility, or Volume through Treatment. No treatment is associated with this alternative.

12.2.2.4 Short-term Effectiveness. This alternative can be implemented immediately without additional risks to the community, workers, or the environment. No specialized equipment, personnel, or services are required to implement the Institutional Control alternative.

12.2.2.5 Implementability. No implementation concerns are involved with the Institutional Control alternative.

Table 12-2. Evaluation of compliance with ARARs for Alternative 2: Institutional Control-for CFA-08 only.

Statute	Citation	Evaluation
Action-specific		
Idaho Fugitive Dust Emissions	IDAPA 16.01.01.650	ARAR/No
NESHAPs for radionuclides from DOE facilities, emission monitoring, and emission compliance	40 CFR 61.92	ARAR/Yes
	40 CFR 61.93	ARAR/Yes
TBCs		
Limit of 100 mrem/yr EDE to public from exposures to external and internal radiation sources	DOE 5400.5	TBC/Yes
Limit of 10 mrem/yr EDE to the public from airborne doses	DOE 5400.5	TBC/Yes

12.2.2.6 Costs. Estimated present worth costs for the Institutional Control alternative for CFA-08 are shown in Table 11-1. Postclosure costs were estimated for the full duration of the 100-year period of monitoring. Costs for preparing deed restrictions are included, however long-term costs for maintaining them are not. The alternative cost estimates are for comparison purposes only, and are not intended for budgeting, planning, or funding estimates.

12.2.3 Alternative 3(a): Conventional Excavation/On-INEEL Treatment and ICDF Disposal/Institutional Controls

This alternative could be applied to any OU 4-13 site of concern. Aspects of the detailed analysis of Alternative 3a specific to individual sites are identified in the discussion below.

12.2.3.1 Overall Protection of Human Health and the Environment. This alternative would provide highly effective, long-term protection of human health and the environment. Removing soil contaminated above PRGs to a depth of 3 m (10 ft) bgs, and treating soil would eliminate potential long-term human health and ecological risks associated with future exposure to or migration of the contaminants, by eliminating the sources. Institutional controls would be implemented at any site where contamination above PRGs remained at depths greater than 3 m (10 ft) bgs, to ensure long-term effectiveness of the remedy.

This alternative is also environmentally protective during implementation, based on the engineering controls that would be used to prevent contaminant migration during excavation and treatment activities.

12.2.3.2 Compliance with ARARs and TBCs. Table 12-3 presents the evaluation of this alternative for compliance with ARARs and TBCs for each site. Performing excavation using air monitoring and dust suppression, as needed, would ensure compliance with the emissions control ARARs.

Table 12-3. Evaluation of ARARs and TBC compliance for Alternative 3a: Excavation/On-INEEL Treatment/ ICDF Disposal/Institutional Controls.

	Statute (Subject)	Citation	Evaluation		
			CFA-04	CFA-08	CFA-10
12-8	Action-specific				
	Idaho Fugitive Dust Emissions	IDAPA 16.01.01.650	ARAR/Yes	ARAR/Yes	ARAR/Yes
	NESHAPs for radionuclides from DOE facilities, emission monitoring, and emission compliance	40 CFR 61.92 40 CFR 61.93 Subpart M-asbestos	ARAR/Yes ARAR/Yes ARAR/Yes	ARAR/Yes ARAR/Yes Not ARAR	ARAR/Yes ARAR/Yes Not ARAR
	Hazardous Waste Determination	40 CFR 262.11	ARAR/Yes	ARAR/Yes	ARAR/Yes
	Security	40 CFR 264.14	ARAR/Yes	Not ARAR	ARAR/Yes
	Equipment Decontamination	40 CFR 264.114	ARAR/Yes	Not ARAR	ARAR/Yes
	Use and Management of Containers	40 CFR 264 Subpart I	ARAR/Yes	Not ARAR	ARAR/Yes
	Land Disposal Restrictions	40 CFR 268.40, .45, .48	ARAR/Yes	Not ARAR	ARAR/Yes
	Miscellaneous Units	40 CFR 264.601, 264.602	ARAR/Yes	Not ARAR	Not ARAR
	Chemical-specific				
	Rules for the Control of Air Pollution in Idaho (.210-Demonstration of Preconstruction Compliance with Toxic Standards; .585-Toxic Air Pollutants Non-Carcinogenic Increments; .586-Toxic Air Pollutants Carcinogenic Increments)	IDAPA 16.01.01.210, 16.01.01.585 and 16.01.01.586	ARAR/Yes	ARAR/Yes	ARAR/Yes
	TBCs				
	Radioactive Waste Management (DOE low-level waste generation, characterization, acceptance criteria, treatment, shipment, disposal, QA, records and reports).	DOE 5820.2A, Chapter III(3)(c, d, e, f, g, i, l, m)	TBC/Yes	TBC/Yes	Not TBC
	Radiation Protection of the Public and the Environment (Limit of 100 mrem/yr EDE to public from exposures to external and internal radiation sources.) (Limit of 10 mrem/yr EDE to the public from airborne doses.)	DOE 5400.5	TBC/Yes	TBC/Yes	Not TBC
	400 mg/kg soil lead residential cleanup level	OSWER Directive 9355.4-12	Not TBC	Not TBC	TBC/Yes

All of the RCRA and IDAPA hazardous waste regulations would be met by characterizing, managing, treating and disposing of RCRA characteristic waste in accordance with all regulations. The LDRs would be met by complying with all applicable provisions of the restrictions. The treatment units would meet the 40 CFR 264.601 and 264.602 substantive requirements for performance standards, monitoring, analysis, inspection, response, and corrective action.

All applicable provisions of DOE orders would be met through the CERCLA RI/FS process. The 400-mg/kg soil lead cleanup level TBC would be met at CFA-10, since all soil contaminated with lead above this concentration would be removed. These alternatives are therefore considered capable of complying with all ARARs and TBCs identified.

12.2.3.3 Long-term Effectiveness and Permanence. This alternative would achieve long-term effectiveness and permanence because contaminated soil and debris would be completely removed from the sites. The long-term risk to human health and the environment would be transferred from WAG 4 to the ICDF. All residuals generated would be managed in accordance with ARARs.

The ICDF would provide secure storage of all contaminated soil from all sites. Institutional controls would ensure effectiveness of the remedy at any site where contamination above PRGs remained below 3 m (10 ft) bgs.

12.2.3.4 Reduction of Toxicity, Mobility, or Volume through Treatment.

No reduction in toxicity or volume would result from chemical stabilization of CFA-10 D008 and CFA-04 D009 (low-mercury) soils. Volume increase would likely be in the range of 200% (Gering and Schwendiman 1996). Mobility of lead and mercury would be reduced by microencapsulation in the stabilized wasteform. This process is not irreversible, as water infiltrating through a degrading concrete wasteform could eventually leach mercury. However, the wasteform would likely remain intact for at least several hundred years. Relatively small quantities of secondary waste including decontamination fluids and personal protective equipment (PPE) would be produced.

Soil sorting using a segmented gate system would likely significantly reduce the volumes of CFA-08 soils disposed of in the ICDF, however actual reductions are site-specific and could only be determined during pilot testing. Over 99% volume reduction was reported for Cs-137 in high moisture content clay soils at the Savannah River Laboratory, which are considered difficult processing conditions. A separation efficiency of 90% was assumed for cost estimating purposes for this alternative. The total mass of Cs-137 that may be removed at CFA-08 using segmented gate separation was not estimated. Sorting would not reduce toxicity and mobility of Cs-137.

This treatment process is not considered irreversible, since the COCs would not be destroyed, and the toxicity of COCs would not be reduced. Residuals remaining after treatment would consist of clean soil, Cs-137 contaminated soil and relatively small quantities of equipment decontamination fluids and discarded PPE.

If segmented gate sorting is not found to be cost-effective for Cs-137-contaminated INEEL soils during pilot testing in 1999, then treatment would be eliminated from this alternative and CFA-08 soils would be disposed of directly.

12.2.3.5 Short-term Effectiveness. Any health risks to workers during excavation, removal and treatment of WAG 4 remediation waste could be effectively mitigated using standard administrative and engineering controls including dust suppression and appropriate PPE. Short-term effectiveness is

therefore assessed as moderate. Equipment operator exposures would be minimized to the extent possible. Excavation equipment modified with positive-pressure ventilation system cabs and HEPA filters for use in contaminated areas is available at the INEEL from previous remedial actions at the INEEL.

Environmental impacts for this alternative are minimal and are similar to those for the excavation and disposal alternative. No environmentally sensitive archaeological or historical sites, wetlands, or critical habitat exist at WAG 4.

The RAOs would be achieved by this alternative once excavation, treatment, ICDF disposal and implementation of institutional controls were complete. The estimated time required to perform the actual removal and treatment of contaminated soil at any site is less than 6 months. However, the estimated time to prepare environmental assessments, safety analyses, and design phases, as well as performing the removal, treatment and verification sampling is 18 to 24 months.

12.2.3.6 Implementability. Implementability of ICDF disposal is uncertain; otherwise this alternative is technically and administratively implementable. Chemical stabilization of lead and mercury have been previously performed onsite on INEEL soils. Potential vendors for chemical stabilization were identified (EPA 1998). Implementability of segmented gate sorting is considered moderate. Segmented gate separation of radionuclide-contaminated soils will be evaluated at pilot-scale at the ICPP in 1998.

12.2.3.7 Cost. The estimated cost for this alternative for each site is identified in Table 11-1. The alternative cost estimates are for comparison purposes only and not intended for budgetary, planning, or funding purposes.

12.2.4 Alternative 3(b): Conventional Excavation/Treatment and Off-INEEL Disposal/Institutional Controls.

This alternative could be applied to any OU 4-13 site of concern. Aspects of the detailed analysis of Alternative 3b specific to individual sites are identified in the discussion below. This alternative is sufficiently similar to Alternative 3a that only differences between the two are discussed.

12.2.4.1 Overall Protection of Human Health and the Environment. This alternative is essentially equivalent to Alternative 3a with respect to this criterion.

12.2.4.2 Compliance with ARARs and TBCs. Table 12-4 presents the evaluation of this alternative for compliance with ARARs and TBCs for each site. This alternative is essentially equivalent to Alternative 3a with respect to this criterion. This alternative is capable of complying with all of the ARARs and TBCs identified.

12.2.4.3 Long-term Effectiveness and Permanence. This alternative is essentially equivalent to Alternative 3a with respect to this criterion.

12.2.4.4 Reduction of Toxicity, Mobility, or Volume through Treatment. This alternative is essentially equivalent to Alternative 3a with respect to this criterion.

12.2.4.5 Short-term Effectiveness. This alternative is essentially equivalent to Alternative 3a with respect to this criterion.

Table 12-4. Evaluation of ARARs and TBC compliance for Alternative 3b: Excavation/Treatment/ Off-INEEL Disposal/Institutional Controls.

	Statute (subject)	Citation	Evaluation		
			CFA-04	CFA-08	CFA-10
12-11	Action-specific				
	Idaho Fugitive Dust Emissions	IDAPA 16.01.01.650	ARAR/Yes	ARAR/Yes	ARAR/Yes
	NESHAPs for radionuclides from DOE facilities, emission monitoring, and emission compliance	40 CFR 61.92 40 CFR 61.93 Subpart M-asbestos	ARAR/Yes ARAR/Yes	ARAR/Yes Not ARAR	ARAR/Yes Not ARAR
	Hazardous Waste Determination	40 CFR 262.11	ARAR/Yes	ARAR/Yes	ARAR/Yes
	Equipment Decontamination	40 CFR 264.114	ARAR/Yes	Not ARAR	ARAR
	Use and Management of Containers	40 CFR 264 Subpart I	ARAR/Yes	Not ARAR	ARAR/Yes
	Land Disposal Restrictions	40 CFR 268.40, .45, .48	ARAR/Yes	Not ARAR	ARAR/Yes
	Miscellaneous Units	40 CFR 264.601, 264.602	ARAR/Yes	Not ARAR	Not ARAR
	Chemical-specific				
	Rules for the Control of Air Pollution in Idaho (.210-Demonstration of Preconstruction Compliance with Toxic Standards; .585-Toxic Air Pollutants Non-Carcinogenic Increments; .586-Toxic Air Pollutants Carcinogenic Increments)	IDAPA 16.01.01.210, 16.01.01.585 and 16.01.01.586	ARAR/Yes	Not ARAR	Not ARAR
	TBCs				
	Radioactive Waste Management (DOE low level waste generation, characterization, acceptance criteria, treatment, shipment, disposal, QA, records and reports)	DOE 5820.2A, Chapter III(3)(c, d, e, f, g, i, l, m)	TBC/Yes	TBC/Yes	Not TBC
	Radiation Protection of the Public and the Environment (Limit of 100 mrem/yr EDE to public from exposures to external and internal radiation sources) (Limit of 10 mrem/yr EDE to the public from airborne doses.)	DOE Order 5400.5	TBC/Yes	TBC/Yes	Not TBC
	400 mg/kg soil lead residential cleanup level	OSWER Directive 9355.4-12	Not TBC	Not TBC	TBC/Yes